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A NEW SYSTEM OF RAILROAD PASSENGER FARES.

INTRODUCTORY NOTE.

[Abstract of a paper read by Professor Edmund J. James, of the University of Pennsylvania, before the American Academy of Political and Social Science, Philadelphia.]

For the last nine months a most interesting experiment in railroad management has been going on in Hungary. The railroad managers in Hungary, and more particularly the minister of commerce, became convinced some time ago that a great reduction in passenger fares would have to be made. The passenger traffic in Hungary had remained, under the prevailing system of management, almost stationary for some time, and was far behind that of Germany and the other leading countries of Europe. It appeared necessary, therefore, to do something to develop travel, if possible.

As a result, a new system of passenger tariffs was worked out and put into operation on the first of August, 1889. The method adopted was that commonly known as the zone-tariff system, in which the rates are fixed not according to the number of miles traveled by the passenger, but according to the number of zones traversed or entered upon during the journey. Starting from a given centre, the railroads are divided into fourteen zones or stretches. The first zone includes all stations within 25 kilometres of the centre; the second all more than 25 and less than 40; the third, all between 40 and 55 kilometres, etc., each zone after the first up to the twelfth being 15 kilometres long, or, as we should perhaps better say, wide. The twelfth and thirteenth zones are 25 kilometres wide, and the fourteenth includes all stations more than 225 kilometres from the capital. Tickets are sold by zones, being good for all stations within the zone.

Two grades of local tickets were adopted, the first being to the first station and the second to the second. The third station comes within the zone ticket.

A normal fare was adopted per zone (taking 40 cents as the gulden) of 20, 16 and 10 cents per zone, according to the class one uses—first, second or third. The fare for any zone up to the twelfth is found by simply multiplying the number of the zone into this normal rate. The fare for stations in the thirteenth zone is fourteen times the normal rate, except for the second class, in which case it is a trifle less. The fare for stations in the fourteenth zone, which includes all stations more than 225 kilometres, is sixteen times the normal rate with the exception of second class fare again, which is a trifle less. This system, as will be shown in a moment, introduced a great reduction in the average fare and an enormous reduction in the long-distance fare.

How radical a change this system implies for a large part of the traffic can be seen in the extreme cases, i. e., in those in which the reduction has been greatest. The fare for all stations in the fourteenth zone, which, as said above, includes all stations more than 225 kilometres from the capital, are 8, 5.80 and 4 gulden respectively for the three classes, corresponding to \$3.20, \$2.32 and \$1.60. The greatest distance which can be traveled for this sum is 731 kilometres, or 457 miles, making the rate per mile from Budapest, for example, to Kronstadt 70, 51 and 35-100ths of a cent for the three classes respectively. If we had the same rate in this country, it would be possible to buy a railroad ticket to Chicago from New York for \$3.00. The fare from New York to Philadelphia would be 32 cents.

The above is, of course, the extreme rate at one end, but the extreme rate at the other end of the same zone is still a great reduction on old rates in Hungary, as will be shown in a moment. It represents also a much lower rate than we have anywhere in this country. The station at the limit of the zone nearest to the starting-point would, of course, be 225 kilometres, about 140 miles, the rates to this being the same as to the farthest one away, i. e., 2.2, 1.7 and I.I cent a mile for the three classes. If we count the extreme distance within the other zones running backward from the fourteenth, we shall find the rates to be about 1.7, I.I and .6 of a cent a mile, which are far below anything which we can show in the way of low rates for such distances.

The reduction, as compared with the old rates, is enormous. The old rates from Budapest to Kronstadt were 44, 31 and 22 gulden; the new are 8, 5.8 and 4, a reduction of 82 per cent. This represents the extreme reduction, the per cent. of reduction growing smaller as you go nearer to the starting-point. At Klausenburg the old rates were 24, 17 and 12, as compared with the rates just given, the distance being 400 kilometers, a reduction of 66.6 per cent. At Medzo Telegd, a distance of 271 kilometres, the reduction is still more than 50 per cent., and at 100 kilometres the reduction is still nearly 50 per cent., while local reductions have also been very considerable.

The simplification of the tariff is very great. Under the old system, the number of distinct tickets which had to be kept in every large office was nearly 700. It is now only 92.

The railroad tickets are now placed on sale like postage stamps at the post offices, hotels, cigar shops and other convenient places. The public is greatly pleased at the discarding of the complicated machinery of ticket selling as practised under the old system.

The most interesting thing, however, in this experiment, is the way in which the passenger traffic has increased under the stimulus of the new rates. The time is too short to enable us to draw definite conclusions, but the facts are striking and significant. The number of passengers during the last five months of 1887 was 2,389,400; during the same period of 1888, was 2,381,200; while for the same period of 1889—the first period under the new system—it

was 5,584,600, an increase of over 133 per cent. The receipts from the traffic under the new system were over 18 per cent. greater than under the old. In other words, passenger traffic will respond to lower rates, a thing which some railroad managers have denied.

Hungary was in some respects the most unfavorable country in Western Europe for such an experiment. It has relatively a small population, scattered over a large territory, poor, ignorant, conservative, the kind of a population not likely to respond quickly to such a thing as a reduction in long distance railroad fares. The success of the experiment has fixed the attention of railroad managers on the Continent. Austria is about to adopt a somewhat similar system. French, Belgian and German engineers are going to Hungary to study the system on the spot.

It would be well for our own railroad managers who complain that passenger traffic is not profitable to look into the matter. The American people, reputed to be the most restless in the world, has not nearly as many passengers per head of the population as England, and it is far exceeded in the number of passengers to mile of railway by half a dozen countries in Europe. This is the result of our peculiar economic conditions in great part. It is also to some extent due to the fact that our railroads have never given anything like the same attention to developing passenger traffic as they have to freight traffic. The example of Hungary is of special value to us because its economic conditions are in many respects similar to our own, and

¹ Since the above paper was read, later figures have been published showing that up to the 31st of March, *i. e.*, for the first eight months of the experiment, the increase in passenger traffic was 169 per cent. over the traffic in the corresponding eight months under the old system, having risen to 7,770,876 as compared with 2,891,332. The result is still more remarkable with regard to traffic between neighboring stations. Whereas, under the old tariff only 255,000 persons used the railways for such purpose, their number during the above eight months rose to 4,367,586. It is reported in Budapest that the government is contemplating a still further reduction.

In the Zeitschrift für Staats u. Volkswirthschrift (Hertzka's paper) of February 16th, 1890, it is stated (p. 10) that this enormous increase in traffic has been handled without any increase in operating expenses. This could be done because the cars under the old system were scarcely ever more than one-third full.

because the railways involved in the experiment are to a large extent private and not State railways.

The following pages contain the translation of a document issued by the Hungarian government in regard to the new system:

I.

ZONE-TARIFF IN HUNGARY.1

Although the freight traffic on the railroads of Hungary has steadily increased, the passenger traffic has shown a decided tendency to stagnation. This fact could not fail to impress the Minister of Public Works and Highways.

Anxious to encourage an increase in the passenger traffic—so essential an element in the economic life of the country—the Minister issued season tickets, trip-tickets in book form, mileage tickets, etc., and adopted other means in the endeavor to develop this traffic by judiciously applied reductions of the tariff.

The extraordinary eagerness with which the public made use of these reductions in passenger rates, and the experiences gathered in the course of the experiments, proved conclusively the necessity for the reductions which had been made, and that they supplied a real need. But, on the other hand, experience showed that these partial reductions were inadequate to extend the benefits of cheap traveling to all ranks and classes of the public. The greater part of the public continued, as in the past, to use the railroad in cases of absolute necessity only, and to consider long trips a luxury. This appeared clear from the fact that Hungary furnished, annually, one passenger per capita of the population; Austria more than two, Germany five, and England fifteen.

On comparing the ordinary passenger rates which were in force in the different countries, it was ascertained that —even omitting the passenger tax—passenger rates were decidedly higher in Hungary than in most of the countries

¹Le Tarif per zône**s** en Hongrie. Budapest. Imprimerie Victor Hornyanszky, 1890.

of Europe. It appeared from statistics that on account of the distances which separate Hungarian centres of traffic, the average length per trip traveled was in Hungary twice as long as in Germany or Austria, being in Germany 28 kilometres; in Austria about 37 kilometres, and in Hungary 61 kilometres.

From this condition of affairs it was evident that the system of passenger rates demanded a radical reform suited to the special conditions of Hungary; a reform which, while taking due account of the economic condition of the people and the above-noted features of the passenger traffic, should be based on the following considerations:

- I. The removal of the disadvantages attending long distance travel because of its high cost, and the elimination of the element of distance as far as possible, especially with relation to the capital, since intercourse between the capital and other parts of the country was rendered difficult by these high rates. To attain this object it was necessary that a maximum rate should be fixed which the public could easily pay, thus making long distance travel possible.
- 2. The establishment of methods which would place the offered reductions within the reach of all, and adapt them to the requirements of all ranks and classes of the entire population.
- 3. That the system adopted should contribute effectually to the development of the traffic, and should compensate, indirectly, for the sacrifices which the large reductions in the tariff would involve.

In order to make the reform effectual it was also necessary that the new system should be easy to operate, should offer economy of labor and expense, and be readily understood.

Finally, it was essential to consider the great economic and civilizing effects of such a reform, and also its influence upon the capital city which, by means of an intelligent application of the reform, would become the true centre of the entire country.

It was evident, therefore, that the radical reform of our passenger tariff could not be a purely theoretical reform, or the imitation or adoption of any existing system, but that the special needs of our economic conditions should be considered, and that a system suited to these and founded upon their peculiar nature, should be established.

It will be found that the tariff by zones best satisfied these requirements, because this system admits of the greatest simplification of management, and it makes possible a system of universal sale of railroad tickets, such as is adopted for the sale of stamps.

On account of the new passenger rates, it was necessary to change the baggage rates. This was also desirable, because of the opportunity afforded of thereby offering to the public every possible convenience, and of assuring to the administration the possibility of the simplest system of management. This change of necessity involved the abolition of the privilege of free baggage. The abolition was justified by the consideration that the privilege is in reality not just anyhow, since passengers who have no baggage are obliged to pay the same price as passengers who have, although the latter are usually well-to-do and receive a special service from the railroad for which it is fair they should pay. At the same time, it was intended to offer new facilities to travelers who are obliged to have heavy baggage, and to establish, for the conveyance of baggage, reduced zone rates which, compared with the previous high rates, made a notable reduction.

In order to make intelligible the manner in which this reform has been carried out, the text of the new tariff has been presented in detail below.

II.

Tariff of rates for passenger and baggage traffic upon the railroads of Hungary. In effect August 1st, 1889.

Note.

The provisions relating to carriage of passengers, baggage and dogs are to be found in the Rules and Regulations of the service.

Kilometric distances indicated in the official tables will constitute the basis for calculation of rates.

The cost of fare and of revenue stamp are always included in the rates given by this tariff.

The passenger tax will not be collected in the following cases, viz.:

- I. For the carriage of travelers and baggage belonging to the Royal and Imperial Court.
 - 2. On collateral charges.

Note.—Special arrangements will be made for the Oriental Express.

GENERAL REGULATIONS.

According to the following table, passenger rates are divided into two groups:

- (a) Local Traffic.
- (b) Distance Traffic.

Tickets at reduced rates issued for the two zones which form the local traffic groups are good only for ordinary, omnibus and mixed trains. If a passenger desires to take a fast train for a station belonging to the local traffic group, he must pay the price fixed for the first distance-traffic zone. The distance-traffic group, divided into fourteen zones, comprises all the stations except those of the local traffic.

The division of the stations among the local and distance zones is given in the tables on pages 17 and following of the printed tariff.¹ These tables, however, contain only the stations comprised between zones I to XIII, so that all the stations which do not appear in these tables are included

 $^{^{\}rm 1}\,{\rm This}\,{\rm list}$ is not printed here, as it is not necessary to an understanding of the system.

A. PASSENGER TRAFFIC. TARIFF OF CHARGES.

					RICE C	of Tic	KET.	
						Tax Inc		
Traffic.	Zone	s.	Ordi	Ordinary, Mixed and Omnibus Trains.			ress Tı	ains.
		- -	I.	II.	III,	I.	II.	III.
(a)	Flo	orins.¹ Cents.	0.30	0.15	0.10			
Local Traffic.	2	001101	0.40	0.22	0.15			
(<i>b</i>)	1 to 25 Kilo	metres.	0.50	0.40	0.25	0.60	0.50	0.30
Distance Traffic	I			- 0-				
Distance Traine	26 to 40 II	"	.40	0.80	.20	.48	.40	0.60
	41 to 55	"	1.50 .60	1.20 .48	0.75 .30	1.80 .72	1.50 .60	o.90 .36
	56 to 70 IV		2.00 .80	1.60 .64	1.00 .40	2.40 .96	2.00 .80	1.20
	71 to 85 V		2.50	2.00 .80	1.25 .50	3.00 1.20	2.50 1.00	1.50 .60
	86 to 100 VI	"	3.00	2.40 .96	1.50 .60	3.60 1.44	3.00 1.20	1.80
	101 to 115 VII	"	3.50 1.40	2.80	1.75 .70	4.20 1.68	3.50 1.40	.84
	116 to 130 VII	" I	4.00 1.60	3.20 1.28	2.00 .80	4.80 1.92	4.00 1.60	2.40 .96
	131 to 145 IX	"	4.50 1.80	3.60 1.44	2.25 .90	5.40 2.16	4.50 1.80	2.70 1.08
	146 to 160 X	"	5.00 2.00	4.00 1.60	2.50 1.00	6.00 2.40	5.00 2.00	3.00 1.20
	161 to 175 XI	"	5.50 2.20	4.40 1.76	2.75 1.10	6.60 2.64	5.50 2.20	3.30 1.32
	176 to 200 XII	"	6.00	4.80 1.92	3.00 1.20	7.20 2.88	6.00 2.40	3.60 1.44
	201 to 225 XII	" I	7.00 2.80	5.30 2.12	3.50 1.40	8.40 3.36	6.50 2.60	4.20 1.68
	226 and be	yond.	8.00 32.0	5.80 2.32	4.00 1.60	9.60 3.84	7.00 2.80	4.80 1.92

¹ Figures in upper line of each set are Florins and Kreutzers; in lower line Dollars and Cents. The Florin is reckoned at 40 cents.

in zone XIV, on condition that the line to be traveled does not pass through Budapest and Kelenföld.

It should be stated that the distance-traffic stations are always calculated to Budapest or from Budapest, and that, consequently, for the routes whose destination is beyond Budapest or from Kelenföld the lines this side of and beyond Budapest are considered separate lines, for which the traveler should take two tickets, one good from the station of departure to Budapest and the other from Budapest to the point of destination. The rates to be paid for the different zones are fixed according to the table on page III.

The flag-stations at which tickets are not sold are not given on the time-tables. If the ticket is taken to or from one of these flag-stations the traveler pays in the first case the rate fixed for the station beyond, in the direction of the journey; in the second case the rate fixed for the preceding station.

The rate to be paid for the reciprocal traffic between flag-stations situated between two stations, or for the reciprocal traffic between a flag-station and the neighboring stations is equal to that fixed for the first zone of local traffic.

Every passenger who has a ticket of an inferior class can, if there are places unoccupied, travel in a compartment of superior class on payment of the difference in price.

The price of a ticket which has been purchased will be returned in the following cases only, viz.:

- (a) Whenever it shall be impossible to give a passenger the place to which his ticket entitles him, and he refuses to accept a place in a car of inferior class. If a traveler who cannot obtain a place in a car of superior class to which he holds a ticket is content with an inferior class, he shall have a right to have the difference in price refunded.
- (b) Whenever sickness or other cause shall make it impossible for anyone to travel in society or to continue

his journey already begun, he may demand that fractional part of the amount paid for the ticket, which corresponds to the unaccomplished part of his trip, and also the baggage charge.

(See Section 13 of Rules and Regulations for the Service.)

(c) Whenever the train for which a ticket is given does not complete its journey, or the train is delayed in its course, the passenger can demand the refunding of the portion of the fare corresponding to the unfinished portion of the journey. If a traveler whose ticket is stamped misses the train he has no right to have the cost of the ticket refunded, or to any indemnity whatever. If, however, he promptly presents his ticket to the station agent in order to have the time extended, his stamped ticket is good during the same or following day on another train, the rate of fare on which is not higher that of the missed train.

Travelers who, as soon as they enter the car, inform the conductor that, on account of a detention, they were unable to procure a ticket at the ticket office, will be obliged to pay an excess of 24 cents (60 kreutzers), including passenger tax and stamp.

The same excess will be charged every traveler who desires to take a longer journey than that to which his ticket entitles him. In this case the traveler should, before reaching the limit of the zone for which his ticket is good, inform the conductor of his intention to extend his journey. In default of this he will be considered—for the distance traveled beyond the limit—as a traveler without a ticket, and as such liable to a fine. The amount of this fine will be regulated by the following rules, viz.:

The traveler who is found en route without a ticket or who presents a worthless ticket, must pay double the regular fare for the whole distance he has already traveled. In case it is impossible to learn the station at which he took the train, double the regular fare for the entire distance already traveled by the train will be charged.

The fine shall never be less than \$1.44 (3 fl. 60 kr.), inclusive of the fare and stamp.

The traveler who takes his place in a car of a class superior to that indicated by his ticket must pay double the difference between the rates of fare for the two classes for the entire distance traveled in the car of superior class. If it is not immediately learned at which station the passenger took the place in the car of superior class, he shall pay double the difference between the rates for the two classes for the distance traveled from the point of departure given on his ticket. If the ticket has been given at a station of a connecting line, double the difference between the rates of the two classes will be calculated for a distance whose starting point is the neighboring station of the connecting line. The minimum charge is fixed at \$1.44 (3 fl. 60 kr.), including tax and stamp.

PARLOR CARS AND PRIVATE CARS.

Travelers can engage private cars on payment of the established charge therefore, if the cars are engaged half an hour before the departure of the train, unless at intermediate stations, at which twenty-four hours' notice must be given.

Tickets purchased to retain an entire car should be stamped "coupee," and the holder of said ticket is obliged to show them at the request of the railway company; failing to do this the conductor may assign to other passengers the unoccupied places in the aforesaid car.

In order to obtain a private car the traveler must take as many first class tickets good for that train as there are places in the car. No larger number of passengers can occupy a private car than are provided with first class tickets. Each passenger additional to the number of first class places must be provided with a first-class ticket.

Parlor cars are furnished only on special order of the management. The rates for parlor cars are fixed for each car separately. The rate, which will be equal to the cost

of from six to ten first class tickets, is regulated by the size and accommodations of the respective cars.

Whenever the number of persons who desire to occupy a private car shall exceed the number of tickets purchased, comformably to the preceding arrangement, as many first class tickets good for the kind of train shall be purchased as there are additional persons in the car.

SEPARATE COMPARTMENTS.

For the use of a separate compartment of the first or second class, as many tickets good for the class of compartment and the kind of train shall be taken as there are places in the compartment.

Separate compartments can be engaged on payment of the charge therefor half an hour before the departure of the train if the station is a railroad terminus, or twentyfour hours if an intermediate station. Berths and separate compartments in sleeping cars, if any are to be had, can be engaged on the same terms.

Only as many passengers can occupy a special compartment as there are available places in the compartment.

HOSPITAL CARS.

Any person who, on account of illness or other reason, cannot travel in ordinary passenger cars, can on payment of the price of six first class tickets travel with his nurse in a closed freight car in which his bed may be placed. A third class ticket must be taken for each additional attendant traveling in the same car. Articles for the comfort of the invalid during the journey, and which the attendants should themselves procure and take charge of, will be placed free of charge in the invalid's car; the other baggage will be charged for at the regular rates.

Hospital cars can be engaged twenty-four hours before the departure of the train by making a deposit of \$2.00 (5 fl.), which will be deducted from the cost of conveyance payable before the departure of the train.

The person who has engaged the car loses the deposit if the car is not used within the prescribed time.

Hospital cars will not be attached to fast or express trains.

SPECIAL PASSENGER TRAINS.

Upon condition that the state of the traffic will permit, special passenger trains will be organized, if the order has been given to the proper authorities six hours in advance, if the station is a terminus, or at least a day in advance if an intermediate station.

For a special passenger train the following charges will be made, viz:.

	For the Locomotive.	For each parlor car and each passenger coach ordered and attached to a special train per axle.	For other cars attached to a special train whether ordered or on account of the regulations of the Superintendent of way, per axle.	Charge for delay beyond stipulated time of departure.
		and per Kilomet ers and in cents, ad stamp includ	For each half-hour or fraction thereof.	
1	70 .28	24 .096	12 .048	.42 .168

The minimum rate is 96 cents (2 fl., 40 kr.) per kilometre, total of \$21.20 (53 fl.), cost of tax and revenue stamp included. The charge for the special train must be paid when the train is ordered.

On the formal request of the person who orders the train, and upon authority from the management of the government railroads, cars especially selected will be attached to the special train, even if these cars do not belong to the railroads of the Hungarian government.

The charge for these cars on the lines which will be

¹See foot-note page 111.

traveled by these trains is fixed at 1.4 cent (3.5 kr.) per axle per kilometre, not including rental payable to owner of car. The empty cars will be returned free of charge.

An additional charge of 40 cents (I fl.) per kilometre will be made for way supervision every time that the special train travels during the night on railroad lines where regular trains do not travel during the night, and where there is no night supervision organized.

Whenever the cost of carriage of passengers, animals and other objects by special train, calculated according to the general tariff, exceeds the cost of carriage calculated according to the tariff of the special trains, the highest rate calculated according to the general tariff will be charged.

The stipulated hour for the departure of the train must be exactly observed, unless the delay charges calculated according to column 4 of the preceding table have been previously paid. The special train will be held beyond the stipulated hour of departure only until such time as the delay charge shall equal the amount of the entire cost of conveyance paid, unless a further similar rate is again paid. If the special train ordered is not used the payments received therefor will be returned after the amount of the expenses occasioned to the railroad have been deducted.

REDUCED RATES.

The following classes of persons may travel free:

- (a) Foundlings, less than eleven years old, of Hungarian nationality, who are being taken to the communes to which they belong; persons sent for the foundlings and furnished with credentials from the municipal authority which authorized the transfer of the children may also travel free.
- (b) Vagrants sent by the authorities and furnished with proper credentials, but unaccompanied by government agents; vagrants furnished with a way bill and traveling under charge of the police officers, as well as said officers.

The said officers, when returning to their homes or going in search of vagrants, travel free of charge.

Persons enumerated below can travel at half-price by the omnibus, ordinary or mixed trains:

- (a) Untried prisoners, criminals, deserters being taken to place of enlistment, persons who, by order of the authorities, are en route to present themselves for military examination; male relatives of recruits who are on their way to appear before the commission of revision in order to state their inability to make a living; escorts who accompany deserters or who are returning to their homes, and are furnished with certificates from the proper authorities. (Vagrants conveyed by order of the police authorities, untried prisoners, criminals and deserters should be separated as much as possible from other passengers.)
- (b) Lunatics furnished with certificates from municipal authorities certifying to their indigency and insanity; officers who are going for lunatics or who are returning home after having taken them to an asylum. A separate compartment will be provided for the conveyance of lunatics only on a declaration by the proper authorities that the nature of the insanity is such as to require it.
- (c) Agricultural laborers traveling in companies of at least ten persons, if they are furnished with a letter from the proper authorities certifying to their position; finally, workmen of other kinds traveling in groups of at least thirty men, and whose destination is the same station.

Veterinary surgeons of the government, government foresters, the personnel of quarantine establishments, if they travel in uniform: attendants having charge of shipments, which fact must be certified to by their employers, may travel in the third class with a half-ticket of the third class, in the second with a third class ticket, and in the first with a second class ticket. This favor is good for ordinary, mixed and omnibus trains only.

Season Tickets in Book Form for Budapest and Neighboring Stations.

The following are the rates for passenger service between Budapest and stations in the table given below:

From, To	C	Classe	s.	From, To or Return.		(Classe	es.
or Return.	in F	e of lorins Cen	and			Rate of Fare in Florins and in Cents.		
Distance.1	I.	II.	III.	Di	stance.	I.	II.	III.
53. Aszód	1.00 .40		0.50		Isaszeg		0.40 .16	0.25
Besynö	0.50	0.40 .16	.10	13.	Kelenföld	0.40 .16		0.15 .06
32. Bia-Torbágy	0.50 .20	.088	.06	8.	Köbánya	0.30	0.15 .06	0.10 .04
49. Bicske	1.00		.20	42.	Laczháza	ł	0.80	0.50
Budafok (Halte)	0.40	'	0.15 .06	23.	Máglòd		.088	4
Budafok	0.40	0.22 .088		31.	Mende	.20	0.40 .16	.10
19. Budaörs	0.40		0.15	55.	Nagy-Káta	.40	0.80 .32	.20
51. Dömsöd	1.00		0.50	22.	Péczel		.088	.06
32. Dunavarsány	0.50		0.25	8.	Rákos	,	.088	.06
45. Ercsi	1.00	- 1	0.50		Rákos-Csaba		.088	
12. Erzsebetfalva.	0.40	~	0.15	1	Rakoskeresztur		.088	0.15 .c6
Érd	0.50	0.40	0.25		Soroksár		.16	0.25
37. Gödöllö	0.50	i	0.25		Süly-Sáp		.16	.10
26. Gyomrö	0.50	i	0.25		Szecsö	.40		.20
23. Haraszti	0.50	,	0.25	1	Taksony	0.50 .20 0.40	.i6	.10
38. Herczeghalom	0.50	0.40	0.25	23.	Tötök-Bálint		.088	.c6

¹ In kilometres. The translator found it impossible to get the distance for all the stations, as they are not given in the report at all, and many of the stations do not appear in Henschel's *Telegraph*, from which the distance figures were taken. A sufficient number were found, however, to give a fair idéa of the rate.

For the stations indicated in the preceding table ticketbooks containing thirty or sixty tickets can be obtained at the following prices:

	Pric	e of T	icket-b	ook C	ontair	ing	
Lines upon which the ticket- books are accepted.	30 7	Γicket Class	s of	60 Tickets of Class			nce.1
	I.	I.	III.	I.	II.	III.	Distance.
Budapest to Köbánya " " Péczel	8.50 3.40	4.30 1.72		16.20 6.48	8.10 3.24		
" " Török-Bálint " " Budafok " " Erzsébetfalva " " Maglód	11.40 4.56	6.30 2.52		21.60 8.64	11.90 4.76		23
 " Gödöllö " Bia-Torbágy " Süly-Sáp " Dunavarsány 	13.40 5.36	10.80 4.32		25.00			
" "Besynö " "Herczeghalom } " Érd		11.40 4.56		27.00 10.80		13.50 5.40	38
" " Szecsö " " Laczháza " " Aszód }	27.00 10.80	21.60 8.64	13.50 5.40	48.00 19.20	36.00 14.40		
" "Bicske " Ercsi " "Dömsöd " "Nagy-Káta	28.40	22.80 9.12	14.20 5.68	54.00 21. 6 0	43.20 17.28	27.00 10.80	49 45 51 55

The tickets contained in books are good for all the passenger trains, except fast and express trains, and it is not necessary to present them for stamping at the ticket office before the departure of the train. The ticket-books are transferable, and the owner of the book can use the tickets for those who may accompany him. On each trip the conductor detaches from the book as many tickets as

¹ See note to preceding table.

there are passengers traveling with the same book. The tickets previously detached are useless. The books and tickets which have been detached by the conductor, must be presented on the request of the inspector. The detached tickets are returned to the proper employé at the station of destination.

Two children from two (2) to ten (10) years old can travel with one ticket.

These ticket-books may be ordered in advance, or may be procured at all the stations indicated in the two preceding tables, and also at the city railroad office: Budapest, Marié-Valerie Street, Hotel Hungaria.

From the first of May to the first of October in each year, Sabbaths and holidays included, second and third class return tickets, good for one day, will be sold to Tatatóváros (85 kilom.). These can be obtained at the ticket windows of the central station at Budapest. The rates are \$1.12 (2 fl., 80 kr.) for second class, and 64 cents (1fl., 60 kr.), for third-class. These return tickets are good for all the regular trains, except the fast and express.

The following reductions are made for children from two (2) to ten (10) years old; two children can travel with a single full ticket; one child in second class with a full ticket of third class, and one adult and a child together in the third class with a full second class ticket.

B. BAGGAGE. BAGGAGE RATES.

Distances.	Rate per Package, tax and stamp included.					
Distances.		For 1 to 50 Kilogrammes.	For 1 to 100 Kilogrammes.	More than 100 Kilogrammes.		
From 1 to 55 kilometres	·}	1 .25 .10	.50 .20	1.00 .40		
" 56 to 100 "	}	.50 .20	1.00 .40	2.00 .80		
Beyond 100 "	}	1.00 .40	2.00 .80	4.00 1.60		

¹ See foot note page 111.

GENERAL REGULATIONS.

In general baggage will not be weighed.1

Baggage is not carried free of charge. If baggage is sent to be forwarded the passenger's ticket must be shown.

The baggage charge must be paid when it is sent to be forwarded.

In general, only those articles will be carried as baggage which passengers require during the journey for the personal needs of themselves and family, such as chests, traveling bags, hat boxes, small valises, etc., as well as trunks which belong to traveling salesmen and contain samples. Large packing boxes, barrels and other articles which cannot be considered as necessities during the trip, do not come under this head, and cannot, as a rule, be conveyed as baggage.

Inflammable materials, packages containing liquids or other substances, which could cause any damage whatever, especially loaded firearms, gunpowder, guncotton, easily inflammable chemicals and like articles, cannot be sent as baggage or be carried by passengers.

Hunters and police may carry their firearms and ammunition in their hands.

Passengers may retain in the cars with them small articles which are easy to carry, upon condition that they do not thereby crowd the other passengers in the compartment, and that the custom-house and revenue regulations permit. Passengers can, however, take into the passenger car only as much baggage as they can put in the rack which is fixed above each seat.

The articles which the passenger carries with him must be cared for by himself, and he will not receive a baggage check for them.

Articles excluded by the rules of the service from being shipped as merchandise cannot be sent as baggage.

¹ This seems to mean that it will not be officially weighed and a receipt given therefor, since it must, of course, be weighed more or less accurately to determine the charge. Compare the paragraph on Ad valorem Insurance.

The following articles, butter, eggs, fresh fish, fresh crabs, vegetables, fresh fruit, melted grease, milk, soft cheese (*fromage mou*), compressed yeast, bread, fresh meat, slaughtered cattle, poultry, game, nuts and fresh berries, as well as milk cans returned empty, are accepted as baggage by ordinary omnibus and mixed trains, even if the sender does not make the journey.

These articles can be sent at the rate fixed for "fast freight sent at reduced rates" of the general freight tariff. The weight will be calculated by the dozen kilogrammes.

Baggage, marketing and empty milk cans to be sent as baggage, the first upon the passenger's ticket being shown, should be sent to the station at least fifteen minutes before the departure of the train, in default of which they will be refused.

In special cases, baggage sent without registration, but with the proviso of later registration, will not be considered as forwarded until it has been regularly registered.

Shippers of live animals are obliged to pay the regular rate for their baggage conveyed in the car containing the animals.

Baggage, marketing to be transported as baggage, and empty milk cans are delivered on arrival of the train at its destination upon the presentation of the baggage check for the first, and of the receipt for the other articles.

AD VALOREM INSURANCE.

Only baggage which has been weighed will be insured ad valorem.

The rate for weighing is 4 cents (10 kreutzers) per package.

The charge for ad valorem insurance on baggage and marketing sent as baggage will be 2 per thousand on the amount insured for each 150 kilometres or fraction thereof.

This additional charge is reckoned in entire kreutzers. The minimum tax is 4 cents (10 kreutzers).

In calculating the additional tax the sum insured will be reckoned exactly.

The amount of compensation to be paid in case of loss or damage to baggage will be regulated according to the rules and regulations of the service upon the basis of the actual weight of the baggage.

INDEMNITY FOR LOSS OR DAMAGE TO UNWEIGHED BAGGAGE.

Whenever baggage has been sent to be forwarded without being weighed, the railroad management is only responsible for the number of packages.

The indemnity to be paid in case of loss or injury to unweighed baggage will be calculated according to the following rules:

- (a) In case of loss, the indemnity will be calculated upon the basis of the maximum weight according to which the baggage charge has been calculated. The weight must not exceed 100 kilogrammes per package.
- (b) In case of damage the amount of indemnity will be determined upon the basis of half the maximum weight, according to which the baggage charge has been calculated.

The weight of the uninjured baggage will, however, be deducted from the weight which serves as the basis for the indemnity; the latter shall not exceed the sum to be paid for 50 kilogrammes per package.

The total amount of indemnity to be paid in case of loss or injury to baggage shall not exceed, conformably to the regulations of the service, the sum of \$2.40 (6 florins) per kilogramme in the two cases mentioned above.

INSURANCE AGAINST DELAY.

Insurance against delay, and the calculation of the insurance premium, is made according to the same principles as in the case of ad valorem insurance.

The minimum premium of insurance against delay is fixed at 20 cents (50 kreutzers).

Insurance against delay must be obtained at the shipping station at least half an hour before the departure of the train by which the baggage is to be sent.

STORAGE CHARGE.

A storage charge of 2.4 cents (6 kreutzers) per day for each package will be collected for baggage which is not removed within twenty-four hours after its arrival.

The storage and the contingent expenses for eatables and empty milk cans will be regulated according to the rules of the tariff for "fast freight at reduced prices."

FINES.

Every person who shall offer for shipment as baggage articles which are not admitted as baggage or are entirely forbidden to be shipped, shall pay, aside from the penalties prescribed by police regulations and by the penal code, and aside from his responsibility for all damage resulting from the offense, a fine of \$2.40 (6 florins) per kilogramme, even if no damage has been done. The mere consignment of these articles for shipment is an offense punishable by the above fine.

C. DOGS.

FREIGHT CHARGES.

Rates for carriage of each dog, cost of tax and revenue stamp included.

From 1 to 55 kilometres.	From 56 to 100 kilometres.	Beyond 100 kilometres.
0.251	0.50	1.00
.10	.20	.40

GENERAL REGULATIONS.

The charges for the shipment of dogs is paid at the shipping station.

Every dog must be muzzled and furnished with a dog chain.

Little dogs held upon the knee are carried free of charge if the other passengers in the car do not object to their presence.

AD VALOREM INSURANCE.

Dogs are shipped by fast freight and furnished with a way bill on declaration of value only.

¹See foot-note page III.

Insurance against Delay.

For insurance against delay there will be charged 4-100 of a cent (1-10 kreutzer) for each \$12.00 of valuation (30 florins,) and fractional part thereof carried 7½ kilometres and fractional part thereof. The minimum charge is 6 cents (15 kreutzers), and fractions of kreutzers will be reckoned as whole kreutzers.

CHARGE FOR KEEP.

Whenever dogs are not removed immediately after their arrival at the station to which they were consigned the railroad is not obliged to care for them. If, however, the railroad consents to care for them, a charge of 2 cents (5 kreutzers) per hour for each dog will be made if not removed within two hours after arrival.

OTHER LIVE ANIMALS.

Other live animals, as large as dogs, will be taken by fast or slow freight only when accompanied by a regular waybill. Birds, cats, small monkeys and other animals of the same kind confined in boxes, cages or coops, are excepted from this rule.

III.

What are the results obtained thus far by means of the zone tariff, which was inaugurated August 1st, 1889, and about which the preceding facts have been given?

The following data will enable one to judge whether the result desired has been attained. The aim was to demand of the country the smallest financial sacrifices possible, and yet to inaugurate upon the government railroads a radical reduction of rates. This was to be accomplished by the adoption of a system which, while inducing a large increase in the passenger traffic, would admit of great simplicity in its management, a factor which is indispensable to the bringing about largely developed passenger traffic.

With regard to the reductions which the new tariff presents as compared with the old rates, it is plain, that, in accordance with the nature of the new system, the most

marked reductions have been obtained for distances beyond 225 kilometres.

This will be very clearly shown by the following table:

	om To,			Pr	ICE OF	TICK	ETS.		
	ce Versa.	Tariff.		nary or	Om-	Rapid Trains.			
Distance.	Budapest.		I.	II.	III.	- _I .	II.	III.	
245	Nagyvárad.	Previous		10.40	7.40	17.20	12.20	¹ 8.60	
		Present	5.96 8.00	4.16 5.80	2.96 4.00	6.88	4.88	3·44 4.80	
398	Kolozsvar.	Previous	3.20	2.32	1.60	3.84	2.80 18.70	1.92	
390	TROTOLD VIII.	Present	9.64	6.76	4.80	10.60	7.48	5.28	
	D .		8.00 3.20		1.60		2.80	i.92	
729	Brassó.	Previous		28.90 11.56	19.20 7.68	46.50 18.60		23.20 9 28	
	!	Present	8.00 3.20				7.00		
253	Arad.	Previous		10.80	7.70				
		Present	8.00		3.08 4.00	::	::		
347	Zimony.	Previous	3.20 19.90	2.32 13.70	1.60 9.10	23.30	 16.40	11.70	
		Present	7.96 8.00		3.64 4.00	9.32 9.60	6.56 7.00		
354	Agram.	Previous	3.20 22.70	2.32	1.60	3.84			
334	-8	Present	9.08	6.68	4.56			::	
-0-	F:		3.20	2.32	1.60				
582	Fiume.	Previous		11.12					
		Present	8.00 3.20	5.80	4.00 1.60				
270	Kassa.	Previous	16.40 6.56	11.50 4.60	8.20		13.30		
		Present	8.00	5.80	4.00	9.60		4.80	
	1 .		3.20	2.32	1.60	3.84	2.80	1.92	

For distances less than 225 kilometres (139.8 miles) the reductions are as great, and represent about 40 per cent. of the previous rates. To-day the fare for the superior class of a rapid train is that which was formerly paid for the inferior class of the ordinary train; for the superior class of the ordinary train the rate is that which was charged for the inferior class of the mixed trains.

The following table will show the importance of the reductions which are applied within the smaller zones.

From To or <i>Vice Versa</i> .				PRICE OF TICKET.						
		Tariff.	Ordinary or Omnibus Train			Fast Train.				
W120170 0.0001 T1 100 W100 W100 W100 W100 W100 W10			I.	II.	III.	I.	II.	III.		
Szolnok (154 Kilometres.)		Former }	3.72	2.60	1.84	10.80	3.04	2.16		
	Arad	Present }		4.00 1.60		2.40	1.92	3.00 1.20		
Miskolcz. (88 Kilometers.)		Former }		3.70 1.48				3.10 1.24		
	Kassa	Present }		2.40 .96			2.90 1.16	1.80 •72		

The result of these reductions has been made still more effectual by means of an unexpected arrangement by which the zone tariff of the Hungarian government is applied to

		PRICE OF TICKET.						
	Tariff.		linary ibus T		Fast Train.			
		I.	II.	III.	I.	II.	III.	
From Budapest to Poprád orreturn; as far as Cassovie by fast train. From Budapest to M. Sziget or return as far	}	3.20 26.70 10.68	6.52 5.80 2.32 18.70 7.48	4.56 4.00 1.60 13.30 5.32	10.08 9.60 3.84 28.90 11.56	7.24 7.00 2.80 20.30 8.12	5.04 4.80 1.92 14.50 5.80	
as Debreczen by fast frain.	Present. {	3.20		4.00 1.60				

the reciprocal tariff of the government railroads, of the Northeast Railroad of Hungary and the Hungarian stations of the Kassa-Oderburg Railroad. Thus, for example, the trip from Budapest to Marmaros-Sziget (Northeast R.R.) or to Poprád-Felka (Kassa-Oderberg R.R.), as

well as the return trip, is made by payment of the charge which corresponds to the XIVth zone. The table shows the reduction which results from the aforesaid regulations.

The period which has elapsed since the inauguration of the new system is too short to enable one to express in figures, or to formulate in any other precise way, the results which this remarkable reduction in the rates has already produced, and the influence which it will have upon the economic condition of Hungary.

Subjoined is a table of official data showing the receipts realized since the introduction of the zone tariff into the passenger and baggage traffic, and also the increase of this traffic. By comparing these figures with the corresponding figures of the preceding years, the results of the zone tariff can be shown.

					Excess	1889 over			
	Period.	. 1887.	1888.	1889.	1887.	1888.			
Passengers carried.	Jan. to July. Aug. to	3,148,800	3,206,500	3,512,600	363,800	306,100			
Pa	Dec.	2,389,400	2,381,200	5,584,600	3,195,200	3,203,400			
	Total,	5,538,200	5,587,700	9,097,200	3,559,000	3,509,500			
FLORINS.									
Recipts from Pass'gr Traffic.	Jan. to July. Aug to	5,250,200	1 7		19,000	170,800			
Re Pas	Dec.	4,060,300	3,773,400	4,597,900	538,600	825,500			
	Total,	9,310,500	8,871,800	9,867,100	557,600	996,300			
		:	Dollars a	ND CENTS.					
Receipts from Pass'gr Traffic.	1 1 2200	2,100,080.00	2,039,360.00	2,107,680.00	7,600.00	68,320.00			
sece ass	Dec.	1,624,120.00	1,509,360,00	1,839,160.00	215,440.00	330,200.00			
44	Total,	3,724,200.00	3,548,720.00	3,946,840.00	223,040.00	398,520.00			

FLORINS.

receipts from Jan to July Local Land Local	184,000	197,500	203,900	19,900	6,400
Recei Dag'gg	. 556,600	167,400	246,100	89,500	78,700
Tota	l, 740,600	364,900	450,000	109,400	85,100

DOLLARS AND CENTS.

ipts from ge Traffic.	Jan. to July. Aug. to	73,600.00	79,000.00	81,560.00	7,960.00	2,560.00
Receij Bagʻge	Dec.	222,640.00	66,960.00	98,440.00	35,800.00	31,480.00
	Total,	296,240.00	145,960.00	180,000.00	43,760.00	34,040.00

FLORINS.

Receipts Pass. and ggage. or Jan And or Jan And or Jan And or Jan And or Jan And or Jan And or Jan And or Jan or Da or Da	5,434,200	5,295,900	5,473,100	38,900	177,200
op Dec	4,216,900	3,939,800	4,844,000	628,100	904,200
Tota	l, 9,651,100	9,235,700	10,317,100	667,000	1,081,400

DOLLARS AND CENTS.

Aug Aug	2,173,680.00	2,118,360.00	2,189,240.00	15,560.00	70,880.00
Total Dec	1,686,760.00	1,575,920.00	1,937,600.00	251,240.00	361,680.00
Tota	1,3,860,440.00	3,694,280.00	4,126,840.00	266,800.00	432,560.00

Finally, in regard to the question whether the new system is sufficiently simplified to enable the management to control without difficulty the greatly increased traffic, it is only necessary to state that while the number of *kinds* of

tickets which had to be furnished to the ticket offices amounted to—

(a) Under the old regime:	
For Budapest,	697
For stations having less traffic,	260
For small stations,	8o
the number	
(b) Under the new regime is:	
For large stations,	92
For small stations,	50

It is important to note that the wonderful growth in the passenger traffic has not required an increase in the number of ticket agents. It has even been possible to abolish certain ticket offices in the station at Budapest, since the same ticket office can now issue tickets for routes in several directions.

The ticket regulations are most simple, especially as, since the 1st of December, 1889, arrangements have been made by which railroad tickets are sold in post-offices, hotels and tobacco stores. In these different offices the public can purchase tickets whenever desired, and with his ticket bought in town, a traveler can enter a car without being obliged to have his ticket stamped at the ticket office in the station.

Railroad employés alone are charged with the inspection of these tickets.

Translated by

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 $N.\ B.$ —The extreme rates used in the introductory note for comparison, are rates for third class with no free baggage. The accommodations are, of course, much inferior to the ordinary first class.